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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/727,403	11/30/2000	Richard T. Minner	23087-703	2419

35657 7590 11/18/2004

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MINNEAPOLIS, MN 55402-3901

EXAMINER

TUNG, KEE M

ART UNIT	PAPER NUMBER
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2676

DATE MAILED: 11/18/2004

16

Please find below and/or attached an Office communication concerning this application or proceeding.

FM

**Office Action Summary**

Application No.

09/727,403

Applicant(s)

MINNER ET AL.

Examiner

Kee M Tung

Art Unit

2676

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 August 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

The amendment filed 8/16/04 has been considered in preparing this Office action.

#### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over DeAguiar et al (5,263,136 hereinafter "DeAguiar") in view of Holzmann et al (5,129,013 hereinafter "Holzmann") or Delean (5,907,640).

Regarding claim 1, representative of claims 8 and 9, DeAguiar discloses a method and a computer system for interactively viewing and editing a digital image on a computer system (Figure 6, Col. 1, Lines 21-27; col. 3, lines 58-65; col. 4, lines 7-17; Col. 7, lines 18-25 and Col. 8, lines 23-24) comprising the steps of storing an archival digital image in the computer system (Figure 6, elements 160, 162, 186); maintaining in the computer system a set of viewing data, characterizing the resolution (Fig. 1, Col. 10, lines 40-42), offset (Column 10, lines 64-66) and extent at which to view the current edited rendition of the digital image; maintaining in the computer system a cache of image tiles comprising portions of views of edited renditions of the archival digital image (Fig. 6, element 194); and thereafter updating, in response to image-viewing and image-editing instructions, the viewing data and the state list accordingly, and

assembling in the image tile cache (194), by inductive image generation and in response to image-viewing and image-editing instructions, a set of image tiles sufficient to generate the current view of the current edited rendition of the archival digital image (Col. 6, lines 51-60); including a digital video display (Fig. 6, element 154), a digital video memory buffer (Col. 7, lines 25-34); a user input device and module operative to receive signals from the user-input device and translate them into image-viewing and image-editing instructions (Figure 6, elements 156, 158); an application module, operative (Fig. 190) to receive image-viewing and image-editing instructions from the user-input module, and to update the viewing data and the state list in response to the image-viewing and image-editing instructions, and to assemble in the system's tile cache, in response to the image-viewing and image-editing instructions, a set of image tiles sufficient to generate the current view of the current edited rendition of the archival digital image, and to copy the set of image tiles sufficient to generate the current view of the current edited rendition of the archival digital image into the computer system's video display buffer so as to generate the current view of the edited rendition of the archival digital image (see above). However, DeAguiar fails to explicitly teach in detail, "maintaining in the computer system a state list, characterizing a sequence of image-editing operations to be applied to the archival digital image in order to generate a current edited rendition of the digital image". This is what Holzmann (abstract; col. 2, lines 6-18 and claim 1) or Delean (abstract; Figs. 3 and 4 and their respective areas of the specification) teaches. It would have been obvious to one of ordinary skill in the art at the time the present invention was made to combine the teachings of image editing

operations of Holzmann or Delean into the system of DeAguiar because the memory management system of DeAguiar are often manipulated by a computer for purpose of viewing or editing by a user, such as, the editing operations of Holzmann or Delean as taught by DeAguiar (col. 1, lines 16-26). Therefore, at least claims 1, 8 and 9 would have been obvious.

Regarding claim 2, representative of claim 3, DeAguiar further discloses for each tile in the set of image tiles, comprises: a) locking the tile in the tile cache when it is ascertained that the tile is in the tile cache (Column 13, line 43-47; Figure 14); b) generating the tile from the image file, copying the generated tile into the tile cache (Column 22, lines 40-45), and locking the copied tile in the tile cache when it is ascertained that a current image state is an initial unedited state (Column 11, lines 57-59; 63-67) ;) ascertaining, when the tile is not in the tile cache or when the current image state is not in the initial unedited state, a set of supplier tiles in a prior state sufficient so that the tile can be generated from the set of supplier tiles by application of the image-viewing and image-editing instructions (Column 22, lines 36-41), and c2) assembling the set of supplier tiles (Column 22, lines 1-36), and c3) applying the image-viewing and image-editing instructions to the set of supplier tiles so as to generate the tile and copying the generated tile into the tile cache, and locking the copied tile in the tile cache (see above); including supplier tiles (see above, Figure 7, Column 8, lines 15-67).

Regarding claim 4, representative of claim 5, DeAguiar discloses a method of claim 2 wherein assembling the set of supplier tiles of a tile in the set of image tiles

comprises: a) ascertaining the region in the prior state from which the tile in the set of image tiles is generated (Column 1, line 50; Column 3, line 33-58), and b) ascertaining the set of prior-state tiles intersecting the region (Figure 7, Column 8, lines 15-40), and c) assembling all the supplier tiles in the set (see above).

Regarding claim 6, DeAguiar discloses a method of claim 1 wherein the image-viewing instructions specify the extent of the view of the current edited rendition of the digital image by explicitly identifying the tiles to be viewed (see above, Figures 15A-15C; Figure 20, elements 822, 826; Column 17, lines 21-32; Column 19, lines 3-35; Column 25, lines 50-65).

Regarding claim 7, DeAguiar discloses a method of claim 1 wherein the image-viewing instructions specify the extent of the view of the current edited rendition of the digital image by identifying the region to be viewed, whereupon the addresses of all tiles intersecting the region are computed (see above, Figure 7, Column 8, lines 18, 35-37).

Regarding claim 10, DeAguiar discloses a computer system of claim 9 wherein the computer system comprises a plurality of computers connected by a network (see above, Figure 6, elements 164, 178, Column 7, lines 41-50; Claims 23, 28, 33, 38).

Regarding claim 11, DeAguiar discloses a computer system of claim 10 wherein the network is the Internet (see above, Figure 6, elements 164, 178, Column 7, line 45, *TCP/IP*; Claims 19, 24, 29, 39)

Regarding claim 12, DeAguiar discloses a computer system of claim 10 wherein the electronic digital-data storage device, the state list, the set of viewing data, and the

cache of image tiles reside in a first server computer, and wherein the video digital display device, the digital video memory buffer, the user-input devices, and the user-input module reside in a second client computer, and wherein the application module is partitioned into a server application sub-module resident in the server computer and a client application sub-module resident in the client computer (see above, Figure 6, elements 164, 178, Column 7, line 45, *TCP/IP, FTP, Telnet*).

Regarding claim 13, DeAguiar discloses a computer system of claim 12 wherein the client application submodule is operative: to receive image-viewing and image-editing instructions from the user-input module, and to transmit the image-viewing and image-editing instructions to the server application submodule (see above, Figure 6, elements 164, 178, Column 7, line 45, *TCP/IP, FTP, Telnet*).

Regarding claim 14, DeAguiar discloses a computer system of claim 12 wherein the server application submodule is operative: to receive image-viewing and image-editing instructions from the client application submodule, and to update the viewing data and the state list accordingly, and to assemble in the tile cache, by inductive image generation and in response to image-viewing and image-editing instructions, a set of image tiles sufficient to generate the current view of the current edited rendition of the archival digital image, and to transmit the set of image tiles to the client application submodule (see above, Figure 6, elements 164, 178, Column 7, line 45, *TCP/IP, FTP, Telnet*).

Regarding claim 15, DeAguiar discloses a computer system of claim 12 wherein the client application submodule is operative: to receive image tiles sufficient to

generate the current view of the current edited rendition of the archival digital image transmitted from the server application submodule, and to copy the set of image tiles sufficient to generate the current view of the current edited rendition of the archival digital image into the computer system's video display buffer so as to generate the current view of the edited rendition of the archival digital image (see above, Figure 6, elements 164, 178, Column 7, line 45, *TCP/IP, FTP, Telnet*).

Regarding claim 16, DeAguiar discloses a computer system of claim 12 additionally comprising a second cache of image tiles residing in the client computer (see above, Figure 6, elements 164, 178, Column 7, line 45, *TCP/IP, FTP, Telnet*).

### ***Response to Arguments***

3. Applicant's arguments filed 8/16/04 have been fully considered but they are not persuasive.

Applicant argues that DeAguiar fails to teach the image editing function. The examiner disagrees (see, col. 1, Lines 21-27; col. 3, lines 58-65; col. 4, lines 7-17; Col. 7, lines 18-25 and Col. 8, lines 23-24). Furthermore, the examiner adds new prior art to Holzmman or Delean for more detailed teachings of image editing functions.

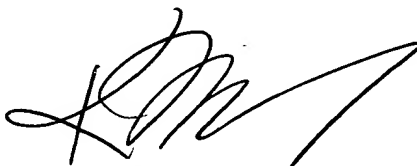
### ***Conclusion***

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kee M Tung whose telephone number is 703-305-9660. The examiner can normally be reached on Tuesday - Friday from 5:30 am - 4:00 pm.



If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Bella can be reached on 703-308-6829. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Kee M Tung  
Primary Examiner  
Art Unit 2676